AMENDMENTS TO THE SPECIFICATION:

Please replace the paragraph from page 1, line 8 to page 2, line 2 with the following amended paragraph:

In, for example, a steel rolling mill, a cross joint is interposed between a roll and a drive shaft for driving to rotate the roll, a steel rolling processing of the steel material can be carried out by rotating to move the role in accordance with rotation of the shaft while the roll is allowed to move in an up and down direction relative to a steel material which is being rolled. The cross joint includes: a cross shaft member (cross) having four ~~pieces of~~ shafts arranged in a cross-like shape; and a cross bearing which has a plurality of cylindrical rollers as rolling members aligned at surroundings of the respective shafts of the member, and a bearing cup as an outer ring mounted to an outer side of outer peripheries of the rollers. Each of outer peripheral portions of the shafts is used as an inner ring race portion. Further, according to the cross joint, the roll and the drive shaft are connected to a first shaft and a second shaft comprising respective pairs of shafts arranged on straight lines in the four ~~pieces of the~~ shafts respectively via the cross bearings and (rotational) torque from the shaft is transmitted to the roll via the cross joint.

Please replace the paragraphs from page 3, line 5 to page 4, line 21 with the following amended paragraphs:

In order to solve the aforesaid object, <u>an exemplary embodiment of</u> the invention <u>has a</u> ~~is characterized by having the following arrangement.(1) A~~ cross joint <u>with</u> ~~comprising: a~~ cross shaft member including, ~~a~~ four ~~pieces of~~ shafts, each having a neck portion and a race portion, and shoulder portions ~~provided~~ between ~~adjacent~~ two neck portions,; rolling

members adapted to rotate around the race portions.; and bearing cups ~~outer ring members~~ fitted to the respective shafts via the rolling members.; ~~wherein the~~ The race portions and the shoulder portions are subjected to roller burnishing.

In another exemplary embodiment of the invention,~~(2) The cross joint according to (1), wherein~~ a race portion ~~formed~~ on the bearing cups ~~outer ring member~~ is subjected to roller burnishing.

In a further exemplary embodiment of the invention,~~(3) The cross joint according to (1), wherein~~ a residual compressive stress at a depth of approximately ~~at least~~ 0.3mm from each of the surfaces of the race portions and the shoulder portions ~~portion~~ subjected to the roller burnishing is ~~made to be~~ equal to or larger than 800 Mpa.

In yet another exemplary embodiment of the invention,~~(4) The cross joint according to (1), wherein~~ the cross shaft member and the bearing cup ~~outer ring member~~ includes a carbon steel ~~for a mechanical structure~~ having a carbon content equal to or larger than 0.42 weight %.

In another exemplary embodiment of the invention, a~~(5) A~~ method of manufacturing a cross joint which includes: a cross shaft member including, ~~a~~ four ~~pieces of~~ shafts, each having a neck portion and a race portion, and shoulder portions ~~provided~~ between ~~adjacent~~ two neck portions;, rolling members adapted to rotate around the race portions;, and bearing cups ~~outer ring members~~ fitted to the respective shafts via the rolling members. The; ~~the~~ method includes ~~comprising the step of~~ subjecting the race portions and the shoulder portions to roller burnishing.

In a further exemplary embodiment of the invention, a~~(6) The~~ method includes ~~according to (5) further comprising the step of~~ subjecting a race portion formed on a bearing

cup ~~the outer ring member~~ to roller burnishing.

Please replace the paragraph from page 6, line 12 to line 21 with the following amended paragraph:

Fig. 1 is an outline sectional view showing an essential portion of a cross joint according to an embodiment of the invention. In the drawing, a cross joint 1 according to the embodiment is provided with a cross shaft member 2 integrally constituted with a base portion 2a and four ~~pieces of~~ shafts 2b arranged to project from the base portion 2a in a cross-like shape, and roller bearings 5 each having a bearing cup 4 as an outer ring member outwardly fitted to an outer side of an outer periphery of each of the shafts 2b via cylindrical rollers 3.

Please replace the paragraphs from page 9, line 22 to page, 11, line 6 with the following amended paragraphs:

As has been apparent from Fig. 2, each race portion 2c after roller burnishing is ensured with a hardness equal to or larger than Hv700 at a depth of at least 0.2mm from the surface and is considerably harder than a product before roller burnishing and a shot-peened product. Further, at a depth less than 0.1mm from surface, the ~~a~~ surface hardness of the shot-peened product is more or less harder than that of each roller burnished race portion 2c, the shot-peened product is deteriorated in the surface roughness after working (the surface is roughened) and needs postworking for smoothing the surface for making the cylindrical roller 3 roll in an oil-lubricated state. Specifically, according to the shot-peened product, it is necessary to remove a surface layer thereof at a depth of about 0.05mm from the surface by

the postworking.

In contrast thereto, according to each roller burnished race portion 2c, since the surface is pressed by point contact with the mirror finish ball in roller burnishing, the surface hardness can be hardened while improving (reducing) the surface roughness by smoothly deforming the surface, and contrary to the shot-peened product, it is not necessary to subject the surface to postworking. Therefore, the surface hardness of each race portion 2c is substantially harder than that of the shot-peened product. Further, according to a test by the inventor of the application, it has been confirmed that the surface roughness of each race portion 2c by roller burnishing can be made to be equal to or less than a half of that before working in a maximum height roughness (Rmax) and a surface hardening coefficient can be increased compared with that before working. In this way, the fatigue strength of the race portion 2c can be increased by improving the surface hardening coefficient of the race portion 2c and increasing the surface hardness and surface originated flaking (surface layer flaking) at the race portion 2c can effectively be restrained from being brought about.

Please replace the paragraph from page 11, line 24 to page, 12, line 20 with the following amended paragraph:

As described above, according to the cross joint 1 according to the embodiment, by subjecting the race portions 2c and 4a provided at the cross shaft member 2 and the bearing cup (outer ring member) 4 and the shoulder portion 2d of the cross shaft member 2 to roller burnishing, while improving roughnesses of the respective surfaces of the race portions 2c and 4a and the shoulder portion 2d, the surface harnesses can be increased and the residual compressive stresses immediately below the surfaces can be increased. As a result, in

comparison with the conventional product which is not subjected to roller burnishing, exfoliation life of the race portions 2c and 4a can be prolonged and the fatigue strength of the race portions 2c and 4a and the shoulder portion 2d can be increased and therefore, long life formation of the cross joint 1 can be achieved. Further, since the cross joint 1 is provided with the race portions 2c and 4a having long flaking life (life of rolling bearing) and provided with the cross shaft ~~shat~~ member 2 and the bearing cup 4 having excellent fatigue strength, a cross joint used under a very severe condition by being integrated to a transmitting mechanism for transmitting high torque from a drive shaft to a driven shaft can simply be constituted.